BARNACLES FROM MAGNETIC ISLAND, NORTH QUEENSLAND.

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(Text-figs. 1, 2.)

Two pieces of limestone containing remains of barnacles were submitted to me for examination and report by Mr. H. A. Longman, Director of the Queensland Museum, in 1930.

These barnacles he thought belonged (*see* Longman, *Abstr. Proc. Roy. Soc. Queensland*, 1930 (1929), p. x.) apparently to *Coronula*, a form found living attached to whales.

The pieces of limestone were found by Miss Marian Rowland among rocks considerably above high-water mark on Magnetic Island, North Queensland. Evidently they represent a comparatively recent deposit, possibly of Pleistocene age, and both pieces were apparently originally attached to a pink biotite granite, for fragments of such a rock can be detected on the under surface of each.

One piece (F. 2026) is composed almost entirely of a mass of *Serpula* tubes which have grown over a number of barnacles. Now that it has been removed from its original attachment, only the bases of the barnacles can be seen. Among the barnacles is a single specimen of *Tetraclita* with its typical cellular walls, but the *four* compartments can only be seen on the inner side of the sheath. There are also five examples of *Octomeris*, in which the *eight* compartments are clearly shown, and seven examples of *Chthamalus*, showing their *six* compartments.

The second specimen consists mainly of the remains of barnacles, apparently all belonging to *Octomeris*, but so encrusted with calcareous matter that only in a few instances is it at all possible to see the form of the shell. Both pieces of limestone are somewhat waterworn, and the bases of the barnacles are worn down.

Three genera of barnacles are therefore represented, namely, *Tetraclita*, *Octomeris, and Chthamalus*, and all three inhabit the littoral zone. So far *Octomeris* has not been recorded from Australasian waters.

Family BALANIDÆ.

Genus TETRACLITA, Schumacher, 1817.

TETRACLITA sp.

The single shell shows only the base, and it is not possible from this to determine more than the genus. It possibly represents one of the varieties of *Tetraclita squamosa* (Bruguière). The shell has a rostro-carinal length of 26 mm.

Family CHTHAMALIDÆ.

Genus CHTHAMALUS, Ranzani, 1817.

CHTHAMALUS sp.

There are seven examples on specimen F. 2026, all showing only the base of the shell, and one has the inner surface of the opercular valves exposed. The walls of the shell are thick, although after due allowance has been made for the fact that they have been worn down by erosion, they are probably no thicker than in the Australasian species *C. antennatus* Darwin (1854, p. 460, pl. xviii., fig. 2). They may even belong to that species, but the apparent toothed edges of the radii, and the sinuous basal margin of the scutum, does not allow one to be at all confident. Largest shell with a rostro-carinal length of 7 mm.

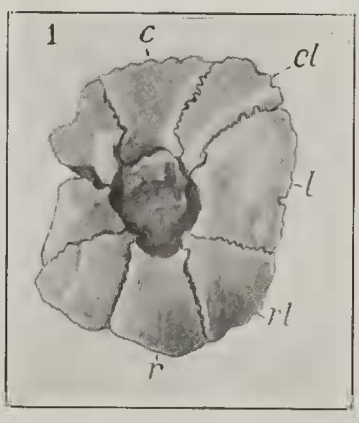
Genus OCTOMERIS, G. B. Sowerby, 1825.

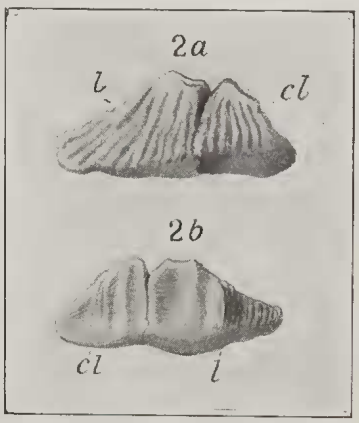
So far this genus is known only by *O. angulosa* G. B. Sowerby (1825, p. 244, pl. xii. Suppl.) from South Africa, by *O. brunnea* Darwin (1854, p. 484, pl. xx., figs. 3a, b; Nilsson-Cantell, 1921, p. 299, text-figs 58, 59, pl. iii, fig. 7; 1926, p. 1; 1930, p. 10) from the Philippine Archipelago, Sumatra, Java, and Pisang Island, S.W. of New Guinea, and by *O. intermedia* Nilsson-Cantell (1921, p. 303, text-figs. 60-61, pl. iii. fig. 8; 1926, p. 1) from Java.

OCTOMERIS CRASSA sp. n.

(Text-figs. 1, 2).

Diagnosis.—Shell brownish coloured, depressed, closely but not so regularly ribbed radially as in *O. brunnea*, with numerous interlocking ribs along the natural edges; walls extremely thick.





Octomeris crassa n. sp.

Fig. 1.—Shell, viewed from the base.

Fig. 2—Lateral and carino-lateral compartments, attached. (*a*) Outer view; (*b*) inner view.

Holotype.—A shell with its base only exposed (fig. 1) on slab F. 2026, in the Queensland Museum. Four other shells are on the same slab, all showing their bases. On another slab are remains of numerous individuals, mostly broken, including one poorly exposing the outer surface, and from this slab were obtained the two attached compartments (figs. 2*a*, *b*).

Locality.—Magnetic Island, North Queensland.

Description.—Shell circular, depressed, with eight compartments, the carino-lateral compartments narrower than the lateral. Basis membranous. Radii comparatively narrow, toothed, the teeth representing the upper part of the ribs on the sutural edges of the compartments (fig. 3). Walls, even after allowing for the wearing down of the base by erosion, extremely thick. Largest shell with a rostro-carinal length of 20 mm.

Comparison with other species.—*O. crassa* is readily distinguished from *O. angulosa*, which has the shell steeply conical and the surface extremely rugged, for the radiating ribs are irregular and stand out quite sharply with extremely deep intervening depressions.

O. brunnea agrees with *O. crassa* in the close-set radial ribs, but the ribs are finer and more regular ; the main difference from *O. crassa*, however, lies in the very thin walls.

O. intermedius has a shell less flattened than in *O. brunnea* and *O. crassa*, but not so steep as in *O. angulosa* ; it has ribs like *O. angulosa*, although a little weaker, and the sutures have distinct teeth which are fewer and larger than in *O. angulosa*, and much fewer than in *O. crassa*. The walls of the shell of *O. intermedius* are not so thick as in. *O. crassa*.

LITERATURE REFERRED TO.

Darwin, C. R., 1854. A Monograph on the Sub-class Cirripedia with figures of all the Species. The Balanidæ, &c., viii., 684 pp., 30 plates. London : Ray Soc.

Nilsson-Cantell, C. A., 1921. Cirripeden-Studien, Zur kenntnis der Biologie, Anatomie und Systematik dieser Gruppe. *Zool. Bidrag Uppsala*, VII., pp. ix, 75-394, plates i.-iii., 89 text-figs.

Nilsson-Cantell, C. A., 1926 (Feb.). Neue und wenig bekannte Cirripeden aus den Museen zu Stockholm und zu Upsala. *Ark. Zool.*, XVIII.*a*, No. 3, pp. 1-46, plate i., 15 text-figs.

Nilsson-Cantell, C. A., 1930. Résultats Scientifiques du Voyage aux Indes Orientales Néerlandaises. Cirripedes. *Mém. Mus. Roy. Hist. Nat. Belg.*, III., Fasc. iii., pp. 1-24, 7 text-figs.

Sowerby, G. B., 1825 (July). On a New Genus of Cirripedes. *Zool. Journ.*, II., pt. 6, pp. 244-5, plate xii., (Suppl.).